

CHERNOKAL'CEV, R.P.; GIMAYURDYE, V.S.; KAMAY, G.I.

Isomerization of esters of alkylsuccinic acids under the effect  
of electrophilic agents. Dokl. AN SSSR 166 no. 1 147 Ja  
'66.

(MTRA 1981)

1. Kazanskiy khimiko-tehnologicheskiy institut im. S.M. Kirova.  
Submitted April 30, 1965.

L 35387-66 EWT(m)/EWP(j) RM

ACC NR: AP6026819

SOURCE CODE: UR/0020/66/166/001/0144/0147

AUTHOR: Chernokal'skiy, B. D.; Gamayurova, V. S.; Kamay, Gil'm

ORG: Kazan Chemical Engineering Institute im. S. M. Kirov (Kazanskiy khimiko-tehnologicheskiy institut)

TITLE: Use of electrophilic reagents for isomerization of alkylarsinic acid esters<sup>1</sup>

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 144-147

TOPIC TAGS: isomerization, ester, arsenic compound, halide, esterification, thermocouple pyrometer, exothermic reaction, thermogram, reaction temperature, iodide

ABSTRACT: The authors studied isomerization of alkylarsinic acids in the presence of electrophilic reagents: alkyl halides, acids and salts. Alcohols were used for esterification of the appropriate acids. A pyrometer with a chromel-alumel thermocouple was used for recording the temperature at which isomerization begins. Isomerization was exothermal in all cases with a single energy release on all thermograms except that for a mixture of dibutyl ester of butylarsinic acid in methyl iodoacetate which showed two exothermal effects beginning at 88° and 223°. The addition of electrophilic reagents lowers the temperature for initiation of isomerization. It was found that this temperature depends mainly on the nature of the alkyl halides and alkoxy groups in the molecule of the ester. Pure diethyl esters of allyl-, ethyl- and butylarsinic acids begin to isomerize at 155°, 227° and 240°, while the initial isomerization temperature for all of these esters is reduced to 92° when they are mixed with ethyl iodide. A similar effect was observed in the case of diethyl esters of methyl-, ethyl- and butylarsinic acids in the presence of ethyl iodide.

Card 1/2

UDC: 547.26.119+541.115  
0266 2567

L 35387-66

ACC NR: AP6026819

6

A reduction in the temperature for initiation of isomerization was also observed when various salts are added to the alkylarsinic acid ester. Small additions of electrophilic catalysts have a considerable effect on the initial isomerization temperature. The effect of these reagents reaches a saturation point at concentrations greater than 5-15 mol.%. The addition of nucleophilic reagents does not lower the initial isomerization point.

This paper was presented by Academician A. Ye. Arbuzov on 30 April 1965. Orig. art. has: 4 figures and 2 tables. [JPRS: 36,455]

SUB CODE: 07 / SUBM DATE: 21Apr65 / ORIG REF: 006

Card 2/2

PB

GAMAZHENKO, V. S.

PA 22T90

UNCLASSIFIED  
Naval Science  
Erosion  
Harbors

Sep 1947

"Reinforcement of the Seashore at Sochi," V. Gamazhenko, 7 pp

"Morskoy Flot" No 9

The author discusses the work done in attempting to halt erosion of the shore at Sochi. The results were rather unsuccessful due to the strength of the swell in that area. He states as an example the fact that a sea wall which had been constructed in 1941 on the southern side of the port of Sochi was almost completely demolished by 1946.

22T90

GAMAZHENKO, V. S.

PA 57720

Under/Engrin  
Construction, Marine  
Erosion

Dec 1947

"Reinforcing the Coast at Sochi," V. Gamazhenko,  
Engr, 5 pp

"Morskoy Flot" No 12

Final installment of series of articles on methods  
used and types of reinforcements built to prevent  
the sea from eroding Sochi coastline further. Cross-  
sectional views of the sea wall, and plan showing  
position of retaining wall.

LC

57720

GAMAZHENKO, V.S.

New type of sea wall installed on a steep-to seashore. Trudy Okean.  
kom.1:5-17 '56. (MLRA 10:2)

1. Chernomorskaya gidrologicheskaya stantsiya Vsesoyuznogo nauchno-  
issledovatel'skogo instituta transportnogo stroitel'stva Ministerstva  
transportnogo stroitel'stva SSSR.  
(Sea walls) (Shore protection)

GAMAZIN, N.A., inzhener; VASILEVSKAYA, R.A., inzhener.

Reconditioning transformer oil in the lead-ins of cutout switches  
and transformers on 110 kv. Energetik 5 no.5:22-24 My '57.  
(Electric cutouts) (Electric transformers) (MLRA 10:6)

LITNERO, I.V. (Moskva); GANIN, S.P. (Moskva); DZHAMAROV, R. (Moskva)

Analysis of the static stability of complex electrical systems  
using medium electronic digital computers. Izv. AN SSSR Energ.  
i transp. 6:701-712 N-D '64. (MIRA 18:3)

LITKENS, I.V., kand.tekhn.nauk; VASIN, V.P., inzh.; GAMAZIN, S.I., inzh.

Study of the steady-state stability of automatically controlled  
electrical systems with consideration of regular perturbations.  
Elektricheskoe no.12:7-13 D '65. (MIRA 18:12)

1. Problemnaya laboratoriya elektricheskikh sistem Moskovskogo  
energeticheskogo instituta.

GAMAZKOV, S. M.

Feb 1948

USSR/Engineering  
Tempering, High-Frequency  
Inductors

"New Type of Inductors for High-Frequency Tempering," V. V. Aleksandrov,  
S. M. Gamazkov, Engineers, 34 pp

"Vest Mash" No 2, pp. 43-46.

Discusses single-wound inductors. Much attention is paid to limiting of the frequency,  
as it is more complicated process than that of multiple-wound inductors. States that  
single-wound inductors are simple to manufacture, but have series of shortcomings.  
Inductors manufactured from round or profiled copper tubes.

PA 62/T24

On abo  
6-20-68

17 hours

2835. Determination by a calorimetric method of power taken off  
the oscillatory circuit during heating by high-frequency current.  
S. M. Gamarkov (Zarod. Lab., 1948, 16, no. 1-2; J. Iron Steel  
Inst., 1949, 161, 64).—Two types of new calorimeter are described  
for determining the power absorbed from the oscillatory circuit  
by the heated object during the high-frequency heat-treatment of  
e.g. steel parts. The calorimeter walls should be of the same  
material as that being heated.

R. B. CLARK

GAMAZKOV, S.M.; PIMENOV, V.G., Engs.

Gearing

Durability of large-sized gears tempered with high frequency current. Vest. mash., 32, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October <sup>1952</sup> ~~x 958~~, Uncl.

Gavrilov, V. S.

Dissertation: "Properties of steel surface-coated in Various Cooling Media." Cand Tech Sci, Central Sciences Institute of Technology and Machine Building, Moscow, 1953.  
(Referativnyy Zhurnal-Khimiya, No 11, Moscow, Jun 54)

SO: SU 318, 43 Dec 1954

Gamazkov, S.M.

AUTHORS: Bogatyrev, Yu. M. and Gamazkov, S.M., Candidates of  
Technical Sciences. 129-9-12/14

TITLE: Electric tempering of surface hardened components during  
subsequent heating. (Elektroutpusk poverkhnostno  
zakalennykh detaley pri posledovatel'nom nagreve).

PERIODICAL: "Metallovedeniye i Obrabotka Metallov" (Metallurgy and  
Metal Treatment), 1957, No.9, pp.51-58 (U.S.S.R.)

ABSTRACT: The aim of the work described in this paper was to solve  
the problem of the possibility of electric tempering of  
surface hardened components during subsequent induction  
heating. First, the temperature distribution along the length  
and cross section of specimens during electric heating is  
investigated; the authors studied the possibility of maintain-  
ing a constant heating regime during the uniform translatory  
motion of the inductor along the heated component, particu-  
larly at low displacement speeds, using currents of 2500 and  
50 c.p.s. It was found that a considerable reduction of the  
speed of movement of the inductor (to 0.5 mm/sec) led in  
certain cases to non-uniform heating. Uniform heating could  
only be achieved by either varying the power or the speed of  
movement of the inductor. Various speeds of inductor move-  
ment and various frequencies were tried and the results are

Card 1/4

Electric tempering of surface hardened components during  
subsequent heating. (Cont.)

129-9-12/14

given. These show that induction heating can be effected by various regimes which ensure the necessary temperature distribution along the cross section of the heated components ~~and also~~ by various speeds of heating and cooling. In further experiments the hardness was measured of specimens after surface hardening, after surface hardening and tempering and after surface hardening and electric tempering; the specimens consisted of "Steel 45" of 500 mm long and 100 mm dia. Further experiments aimed at investigating the structure and the residual stresses. It is concluded that the possibility of utilisation of successive induction heating for the purpose of tempering of surface hardened components is determined by the possibility of uniform heating of various sections along the length of the treated component; fulfilment of this condition (of uniform heating) requires use of such speeds of displacement of the heating equipment relative to the component that the propagation of the heat flux does not cause instability of the process of preliminary heating. The temperature and the speed of heating under conditions of successive electric tempering depend on the transmitted power, the frequency of the

Card 2/4

Electric tempering of surface hardened components during  
subsequent heating. (Cont.)

129-9-12/14

heating current, the dimensions of the component and the inductor and also on the speed of displacement of the inductor. With increasing frequency of the current, speed of movement of the inductor, dimensions of the component, the surface heating effect will increase. For an equal heating temperature the hardness after electric tempering will decrease to a lesser extent than in the case of ordinary tempering; the higher the temperature the higher will be the difference in the hardness between ordinary and electric tempering. The structure of the hardened steel after electric tempering changes less than for tempering in a furnace, owing to the fact that the component is not held for long durations at the maximum heating temperature. In the case of low temperature electric tempering the residual compression stresses in the hardened layer and tensile stresses in the transient layer decrease more intensively than in the case of equivalent tempering in the furnace. In the case of high temperature electric tempering (400 to 500 C) the residual stresses are redistributed and there is a change in sign: there will be tensile stresses in the surface layer and compressive stresses in the

Card 3/4

Electric tempering of surface hardened components during  
subsequent heating. (Cont.) 129-9-12/14

transient layer. Electric tempering can be applied more efficiently under shop conditions than furnace tempering. This is due primarily to the larger variety of parameters, by means of which it is possible to change the regimes of the process and thereby to influence the magnitude and character of distribution of the residual stresses in surface hardened components. In introducing electric tempering considerable difficulties may occur owing to absence of reliable methods of measuring the temperature during the rapid processes of induction heating. Therefore, the authors recommend measurement of the temperature by means of a thermocouple welded onto a reference component when working out the technology of electric tempering for a given manufacturing process. The temperature under shop conditions can be effected by means of contact thermo-couples or thermo-varnishes. Particular attention must be paid to the stability in operation of the induction equipment if reproducible results are to be obtained.

There are 9 graphs, 7 references, all of which are Slavic.

ASSOCIATION: TsNIITMASH.

AVAILABLE:

Card 4/4

Garmazkov

S.M.

65(1)

## PAGE 1 BOOK INFORMATION

Nauchno-tekhnicheskoye izdatelstvo i knizhnoe izdaniye  
"Nauchno-tekhnicheskaya i elektritechnicheskaya upravlyayushchaya" [Chemical  
Electrical Heat Treatment and Electropart Hardening of Metals] Collection of  
Articles. Heat Treatment and Electropart Hardening of Metals [Study] No. 65  
[Annot.] Moscow, 1950. 216 p. [Series] No. 100 copies printed.  
M. M. Mikhalevich, Engineer. (Received) Ed. of Publishing House: I. Yu.  
Geller. Tech. Ed.: A. P. Ovchinnikov. Moscow Ed. for Literature on General Tech-  
nical and Technical Machine Building (Metallurgy), E.A. Ponomareva, Engineer.

**PURPOSE:** This collection of articles is intended for engineers, staffs of plants  
and scientific research institutes dealing with electric heating, electric heat-  
ing treatment, and electropart hardening of metals.

**CONTENTS:** This collection of articles presents the results of scientific research  
work carried out by the Department of Teptritekh (Central Scientific Research  
Institute of Technology and Machinery) on electric heating in the field of high  
and industrial-frequency heating, and electropart hardening of machine parts.  
The process of surface hardening through hardening and tempering of steel  
and cast iron using induction-heating and electrolytic methods, and the results  
of investigation of the effects of electric-heat treatment and electropart  
hardening on the properties of steel and cast iron are described. A brief review  
of industrial applications of induction heating outside the Soviet Union  
is also presented. Various electric-heating and electropart hardening equip-  
ment developed by Teptritekh are described. The book was written for the  
staff members of the scientific research work of Teptritekh, Department of  
Electric Heating.

water by oil, and by other Miller cooling agents, and the effect of the  
medium and the temperature of annealing are also discussed.

Klimochkin, N.M., Engineer. Surface Hardening of Modular Cast Iron  
The author presents the results of investigation on modular cast iron  
heated for hardening by high frequency (50,000 to 550,000 cycles)  
current. He describes the structure and hardness of the surface, wear  
resistance, fatigue strength, and resistance to crack formation, and  
gives recommendations as to how to meet all these quality requirements.

Rogovskiy, Yu.M., and S.M. Gerasimov. Candidates of Technical Sciences.  
Electro-Induction Hardening of Surface-Hardened Parts by Sectional Heating.  
The article deals with the following: direct heating of temperature  
and current and across specimens during electrical heating; the hardness  
of specimens after surface heating; the influence of temperature and  
structure of the material being heated, and the results. A review is given.  
The author compares the data obtained with those from the common  
method of heating performed in a furnace and he stresses the pronounced  
advantages of induction heating.

Aleksandrov, V.P. (Received). Induction Heating-through of Large  
Metallic Bars. Part 1. The author describes methods and equipment for the heating-through  
of large sections and for stamping blanks using induction heating  
of sectional heating of pipe, the latter constituting the main sub-  
ject of this paper. Detailed data on current, frequency, temperature,  
time of heating, and thermal losses in heating various sizes of pipes are  
given.

Rogovskiy, Yu.M., Candidate of Technical Sciences. Structure and Properties  
of Steel Subjected to Electrical Thermo-treatment.  
The author analyzes the method of induction-through-heating of steel,  
the factors affecting uniform heating of pipe, the latter constituting the main sub-  
ject of this paper. Detailed data on current, frequency, temperature,  
time along the cross section of the blank during electric heating,  
the structure of steel after treatment and the mechanical properties  
of steel.

cont'd

BOGATYREV, Yu.M., kand.tekhn.nauk; GAMAZKOV, S.M., kand.tekhn.nauk

Electric tempering of surface hardened parts with consecutive  
heating. [Trudy] TSNIITMASH 89:116-130 '59. (MIRA 12:4)  
(Case hardening) (Tempering) (Induction heating)

AUTHORS: Barziy, V.K., Vaynshtok, M.I. and SOV/133-59/24/31  
TITLE: The Quality of a 13-ton Ingot of Steel 14KhGS (Kachestvo  
13-t slitka stali 14KhGS)

PERIODICAL: Stal', 1959, Nr 5, pp 456 - 459 (USSR)

ABSTRACT: In view of the high-quality requirements for sheets from steel 14KhGS (used for the manufacture of tubes) a thorough investigation of a 13-ton ingot of this steel, particularly regarding its chemical uniformity and distribution of non-metallic inclusions, was carried out. Steel was smelted in a 195-ton open-hearth furnace, whereupon the metal was deoxidised in the bath with ferromanganese (8 kg/t), silicon-manganese (12 kg/t) and ferrochromium (10 kg/t) and in the ladle with 75% ferrosilicon (7.5 kg/t), aluminium (0.25 kg/t) and ferrotitanium (2.5 kg/t). The metal was top-poured into moulds 2 200 mm high with a cross-section of the shrinkage head 1 100 x 640 mm. Chemical composition, %: C 0.13, Mn 1.07, Si 0.55, S 0.030, P 0.016, Cr 0.63, Ni 0.04, Cu 0.10. Three ingots, the second, eighth and fifteenth in the sequence of teeming, were selected for the

Card1/3

SOV/153-59-5-24/31

The Quality of a 13-ton Ingot of Steel 14KhGS

investigation. The investigation of the macro and microstructure, the degree of chemical uniformity, the character and the distribution of non-metallic inclusions and the degree of saturation of metal by gases was done on a plate 25 mm thick, cut out along the height of the eighth ingot (middle position in the sequence of teeming). Sulphur print of the longitudinal cross-section of the ingot is shown in Figure 2, changes in the content of carbon and sulphur - Table 1 and Figure 3, chemical composition of non-metallic inclusions; Table 2, the distribution of gases at various levels of ingot height - Table 3. It was found that: 15-ton ingots of the above steel possess a satisfactory macrostructure; the shrinkage cavity is situated in the shrinkage head of the ingot. In the top part of the ingot a comparatively small positive segregation of sulphur and phosphorus was observed. In the bottom part of the ingot there is a zone with a negative segregation of sulphur; the segregation of carbon is positive nearly in the whole ingot. The remaining elements (silicon, manganese and chromium) do not

Card 2/3

SOV/133-59-5-24/31

The Quality of a 13-ton Ingot of Steel 14KhGS

show any segregation. The largest sulphide inclusions are situated mainly in the axial zone of the ingot and silicate inclusions mainly near to the crust zone - in the head and bottom part of the ingot. Insignificant amounts of alumina and titanium nitrides are distributed uniformly across the cross-section of the ingot. Among non-metallic inclusions, rutile and titanium carbonitrides were found. The content of oxygen in the metal of the ingot investigated varied from 0.0013 to 0.0030% and that of hydrogen from 0.0001 to 0.0002%. The metal was uniform in respect to the nitrogen content (0.004%).

There are 3 tables and 6 figures.

ASSOCIATION: Zavod "Zaporozhstal'" ("Zaporozhs al'" Works)

Card 3/3

AFANAS'YEV, A.S. i GAMAZOV, V.P. (Dnepropetrovsk)

Platinum reference electrode for sodium hydroxide melts. Part 1:  
Oxygen function of platinum. Zhur. fiz. khim. 38 no.12:2823-2827  
(MIRA 18:2)  
D '64.

1. Dnepropetrovskiy metallurgicheskiy institut.

BORISENKO, V.G.; BOZHKO, S.A.; GEPPA, S.A.; ZAYDMAN, I.D.; GAMAZOVA, L.B.

Reasons for the increased brittleness of strips of transformer  
steel. Metallurg 10 no.8:25-27 Ag '64. (MIRA 17:11)

1. Zavod "Zaporozhstal".

GAMBA, J.

GAMBA, J. Using a power shovel for the removal of stable manure. p(4) of cover.

Vol. 6, no. 4, Feb. 1956  
MACHANISACE ZEMEDELSTVI  
AGRICULTURE  
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1956

FUERTES) M.A.; GAMBA, O.M.; KOCZOGH, Akosne [translator]

The construction and putting into operation of the first Argentine reactor. Atom taj 2 no.l:146-189 Ja '59.

GAMBARASHVILI, G. K.

22758 Gambarashvili, G. K. Veprosu Anomalii Menstruatsii. Trudy (Tbilisi  
Gos. Med. In-T), T. V., 1948, C 150-56 - Na Gruz. Yaz. - Rezyume  
Na Rus. Yaz - Bibliogr: S. 155

SO: Letopis', No. 30, 1949

FD-1558

USSR/Chemistry - Coatings

GAMBARDELLA, Ye.I.

Card 1/1 : Pub. 50-15/25

Author : Gambardella, Ye. I.

Title : A rapid method for the identification of nitrocellulose lacquer coatings

Periodical : Khim. prom., No 8, p 496 (48), Dec 1954

Abstract : When a drop of a solution of diphenylamine in concentrated sulfuric acid is placed on nitrocellulose enamel, this solution acquires a blue-black color within 2-3 sec. This color does not appear when a perchlorovinyl or glyptal enamel is tested with the solution. Nitrocellulose coatings must be identified as such in order that they may be stripped with the right agents.

Institution : Central Plant Laboratory of the Plant "Pobeda Rabochikh"

Submitted :

GAMBARDELLA, Ye.I.

New synthetic solvents in the production of lacquers and  
paints. Lakokras. mat. i ikh prim. no. 6:27-31 '60.  
(MIRA 13:12)

(Paint materials) (Solvents)

GAMBARDELLA, Ye, I.

Dichromate method for determining ethyl alcohol in mixtures  
containing aromatic solvents. Lakokras. mat. i ikh prim.  
no. 3:60-61 '61. (MIRA 14:6)

1. TSentral'naya zavodskaya laboratoriya zavoda "Pobeda  
rabochikh".

(Ethyl alcohol)  
(Solvents)  
(Bichromates)

GAMBARJAN  
SAZONTOV, N. V;GAMBARJAN, L.

Exercise in pregnancy and puerperium. Prakt. lek., Praha 32  
(CLML 22:2)  
no.3:51-55 5 Feb 1952,

l. Of the Institute for the Care of Mother and Child (Head--Prof.  
J. Trapl, M. D.), Prague-Podole.

GAMBARIN, L.B., inzh. (Tashkent)

Specialization increases the rate of construction. Stroi.  
truboprov. 7 no.9:22-23 S '62. (MIRA 15:11)  
(Gas distribution)

GAMBAROGLU, K.

The prominent Russian physiologist B.F.Verigo; on the one-hundredth  
anniversary of his birth. Fiziol. zhur. 46 no.11:1422-1423 N '60.  
(MIRA 13:11)

1. From the Pedagogical Institute, Kirovabad.  
(VERIGO, BRONISLAV FORTUNATOVICH, 1860-1925)

GAMBAROGLU, K.

History of the study of blood pressure. Azerb. med. zhur. no.10:  
67-70 O '61. (MIRA 15:6)  
(BLOOD PRESSURE)

GAMBAROGLU, K., kand.med.nauk

Talented Russian internist and physiologist Nikoali Aleksandro-vich Bubnov; on the 100th anniversary of his birth. Klin.med.  
no.1:152-153 '62. (MIRA 15:1)

1. Iz Kirovabadskogo pedagogicheskogo instituta.  
(BUBNOV, NIKOLAI ALEKSANDROVICH, 1851-)

GAMBAROGLU, K., dotsent; LYATIFOV, D., dotsent

S.P.Botkin, founder of Russian clinical medicine. Azerb. med. zhur.  
(MIRA 18:9)  
42 no.6:87-89 Je '65.

GAMBAROV, G.A., inzh.

Centrally compressed prestressed elements with spiral-mesh reinforcement. Bet. i zhel. bet. no.4:164-170 Ap '61. (MIRA 14:6)  
(Reinforced concrete)

GAMBAROV, G.A., inzh.

Creep and shrinkage of triaxially stressed concrete. Bet. i  
zhel.-bet. no.1:21-25 Ja '62. (MIRA 15:4)  
(Concrete—Testing)

GAMBAROV, G.A., inzh.

A study of spirally reinforced prestressed products for precast elements composed of rods. Trudy NIIZHB no.27:103-132 '62.  
(MIRA 15:9)

(Prestressed concrete)

L 62836-65	EWT(m)/EWG(s)-2	Pw-4	JAJ					
ACCESSION NR:	AP5019033				UR/02/6/65/000/012/0007/0067			
AUTHOR:	<u>Matselinskiy, R. N.; Sitnikov, Yu. V.; Katin, N. I.; Stul'chikov, A. N.;</u> <u>Gambarov, G. A.</u>				524.073.671	19		
TITLE:	A structural element. Class 37, No. 172015				524.072.32	B		
SOURCE:	Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 67							
TOPIC TAGS:	structural element, construction method, reinforced concrete					15		
ABSTRACT:	This Author's Certificate introduces a structural element for the upper lattice boom of a reinforced concrete arch with a cross beam. The carrying capacity of the arch is increased by making the structural element in the form of a unit which has a polygonal cross section. At the vertices of the polygon are rods parallel with the longitudinal axis of the unit which are circular in cross section and are connected by diaphragms.							
ASSOCIATION:	none							
Card 1/3								

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614210009-8

I 62836-65	ACCESSION NR: AP5019033	ENCL: 01	SUB CODE:	O GO, MT
SUBMITTED: 26Nov62	OTHER: 000			
NO REF SOV: 000				
Card 2/3				

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614210009-8"

L 62836-65

ACCESSION NR: AP5019033

ENCLOSURE 01

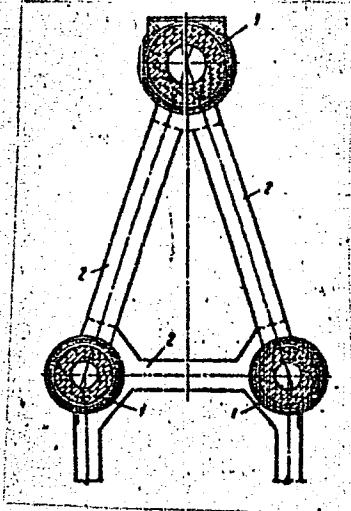


Fig. 1. 1--rods; 2--diaphragms

*Sub*  
Card 3/3

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,  
pp 122-123 (USSR) 14-57-6-12600

AUTHOR: Gambarov, K. M.

TITLE: Location of a Probable Nesting Place of the White-Tailed Plover, Chettusia leucura Licht, in the Mil'skaya Steppe [Nakhozhdeniye i veroyatnoye gnezdovaniye belokhvostoy pigalitsy (Chettusia leucura Licht.) v Mil'skoy stepi]

PERIODICAL: Uch. zap. Azerbaydzhansk. gos. un-ta, 1956, pp 51-54

ABSTRACT: The white-tailed plover has been found only once during winter in eastern trans-Caucasus. It is never seen there at nesting time. In May, 1954, eight white-tailed plovers were found on the Mel'skaya steppe, near Lake Megman, on the right bank of the Kura river. The birds were seen in a mixed nesting colony of black and white

Card 1/2

14-57-6-12600

Location of a Probable Nesting Place (Cont.)

cheeked swallows, sea gulls, meadow larks, and herons. Altogether, 200 nests of various kinds were counted in the colony. It is possible that white-tailed plover nests were among them. This type of nesting is new not only in the Caucasus but also in the whole European part of the USSR.

Card 2/2

O. N. Sh.

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614210009-8

GAMBAROV, K.M.; BAGIROVA, Kh.A.

Distribution and biology of the blackheaded bunting *Emberiza melanocephala* Scop. in Azerbaijan [in Azerbaijani with summary in Russian].  
(MIRA 11:1)  
Uch. zap. AGU no.6:79-88 '57.  
(Azerbaijan--Finches)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614210009-8"

GAMBAROV, K.M.

Department of Vertebrate Zoology at the Azerbaijan State University and its role in the development of zoology in the republic [in Azerbaijani with summary in Russian]. Uch.zap.AUG. Biol. ser. no.2:15-22 '60.

(MIRA 14.:3)

(Azerbaijan--Zoological research)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614210009-8

GAMBAROV, K.M.

Supplement to the list of birds of the Apsheron Peninsula.  
Uch. zap. AGU. Biol. ser. no. 6:35-37 '60. (MIRA 15:12)  
(Apsheron Peninsula--Birds)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614210009-8"

GAMBAROV, K.M.

Distribution of porcupine in Transcaucasia: a new habitat.  
Uch. zap. AGU. Ser. biol. nauk no. 2:25-27 '64 (MIRA 19:1)

MAKAROV, D.I.; GOL'DBERG, A.S.; GESKIN, E.S.; GIL'MAN, S.M.; KRAVCHENKO, A.Ya.;  
GAMBAROV, V.I.

Simple control of air flow. Avtom.i prib. no.1:24-26 Ja-Mr '63.  
(MIRA 16:3)

1. Ukrainskiy gosudarstvennyy proyektnyy institut "Metallurgavtomatika"  
(for all except Kravchenko, Gambarov). 2. Metallurgicheskiy zavod  
imeni Petrovskogo (for Kravchenko, Gambarov).  
(Open-hearth furnaces) (Electronic control)

L 13110-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD  
ACC NR: AP5025784 SOURCE CODE: UR/0363/65/001/009/1502/1505

AUTHOR: Kharakhorin, F. F.; Gambarova, D. A.; Aksenov, V. V.

ORG: none

TITLE: Diffusion and solubility of gold in lead selenide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9,  
1965, 1502-1505

TOPIC TAGS: gold, lead compound, selenide, metal diffusion, solubility

ABSTRACT: Gold labeled with Au<sup>198</sup> was deposited chemically on p-type lead selenide, and the samples were subjected to diffusion annealing at 300-500°C for 15 min to 20 hr. The distribution of gold was then determined by recording the gamma radiation of successively removed layers. The temperature dependence of the diffusion coefficient followed the equation

$$D = 5.6 \cdot 10^{-2} \exp\left(\frac{0.75}{kT}\right) \text{cm}^2/\text{sec}$$

The temperature dependence of the solubility of gold in lead selenide was also determined. Solubility increases with temperature in the 350-600°C range. Above 650°C, the intermediate phase Au<sub>2</sub>Pb is formed. As

Card 1/2

UDC: 546.817'231:546.59

39  
B

L 13110-66

ACC NR: AP5025784

in germanium and silicon, gold in lead selenide has an anomalously rapid diffusion rate. For this reason and because of the relatively low activation energy, it is postulated that the diffusion of gold in lead selenide takes place mainly in the interstices. Orig. art. has: 5 figures, 3 formulas.

SUB CODE: 07/ SUBM DATE: 15May65/ OTH REF: 003/ OTH REF: 001

Card 2/2 HW

L 13109-66 EWT(m)/ETC(F)/EWO(m)/T/EWP(t)/EWP(b)/EWA(c) LJP(c) RDW/JD

ACC NR: AP5025785

SOURCE CODE: UR/0363/65/001/009/1506/1507

AUTHOR: Kharakhorin, F. F.; Gambarova, D. A.; Aksenov, V. V.

ORG: none

TITLE: Diffusion of tin in lead selenide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1506-1507

TOPIC TAGS: metal diffusion, tin, lead compound, selenide, single crystal, electrodeposition

ABSTRACT: Tin labeled with Sn<sup>113+123</sup> was electrodeposited on n-type lead selenide single crystals. Diffusion annealing lasting from 0.5 to 37 hr was carried out at 510-880°C in quartz ampoules filled with argon at 0.5 atm. Layers from 10 to 50 μ thick were then removed and their radioactivity was determined. The diffusion coefficients are given by the equation

$$D = 1.2 \cdot 10^{-8} \exp\left(-\frac{0.81}{kT}\right), \text{ cm}^2/\text{sec}$$

Their values ranged from  $5.5 \cdot 10^{-12}$  to  $3.4 \cdot 10^{-10}$  cm<sup>2</sup>/sec in the tempera-

UDC: 546.817'231:546.811-121

Card 1/2

L 13109-66

ACC NR: AP5025785

ture range studied. It is postulated that the diffusion takes place in lead vacancies. Orig. art. has: 2 figures, 1 formula.

SUB CODE: 07/ SUBM DATE: 15May65/ ORIG REF: 002/ OTH REF: 000

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Card 2/2

T 127/1-66 ETC(a)/ETC(f)/ENG(n)/EWP(t)/MEP(b) LJP(e) JLM/JL  
ACC NR: AP5000842

SOURCE CODE: UR/0181/65/007/012/3481/3484

AUTHORS: Kharakhorin, F. F.; Gambarova, D. A.; Aksenov, V. V.

ORG: None

TITLE: Diffusion and solubility of copper in lead selenide

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3481-3484

TOPIC TAGS: physical diffusion, copper, lead compound, single crystal, selenide, semiconductor conductivity, solubility

ABSTRACT: This is part of a systematic investigation of diffusion and the solubility of impurities in chalcogenides of lead. The article reports the results of the behavior of copper in single-crystal lead selenide at temperatures 93 -- 520°C. The tests were made on lead selenide previously synthesized by the Bridgman-Stockbarger method in quartz ampoules of special shape. The single crystals were grown 11 -- 15 mm in diameter and up to 60 mm long. The crystals were cut perpendicular to the generatrix into discs 1 -- 2 mm thick. The measured samples were of the n-type conductivity with specific resistivity  $\sim 4 \times 10^{-3}$  ohm-cm and carrier density  $\sim 4 \times 10^{18} \text{ cm}^{-3}$ . The diffusion coeffi-

Card 1/2

47

L 1274A-66

ACC NR: AP5000842

cients were determined with the aid of radioactive Cu<sup>64</sup> by successive removal of layers. The results show that at 93 -- 520C the diffusion obeys the equation  $B = 2 \times 10^{-5} \exp(-0.31/kT) \text{ cm}^2/\text{sec}$ , and apparently occurs in the interstices. The solubility has a retrograde character with a maximum value of  $9 \times 10^{18} \text{ at/cm}^3$  at ~8000. The interstitial character of the diffusion is deduced from the large diffusion rate, the low activation energy (0.31 ev). Orig. art. has: 3 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 01Apr65/ ORIG REF: 006/ OTH REF: 011

Card

FLW  
2/2

KHARAKHORIN, F.F.: GAMBAROVA, D.A.; AKSENOV, V.V.

Copper diffusion and solubility in lead selenide. Fiz. tver.  
tela 7 no. 12:3481-3484 D '65 (MIRA 19:1)

L 09067-67	EWT(m)/EWP(t)/ETI	IJP(o)	JD
ACC NR: AP6023914	SOURCE CODE: UR/0363/66/002/007/1200/1205		
AUTHOR: <u>Kharakhorin, F. F.; Aksenov, V. V.; Gambarova, D. A.; Khrustalev, B. P.;</u> <u>Kul'bich, R. K.</u>			
ORG: none			
TITLE: On the mechanism of change of the conduction sign during heat treatment of n-InSb [Paper presented at the All-Union Conference on Diffusion in Semiconductors held in Leningrad on 2 December 1964]			
SOURCE: AN SSSR. Izv. Neorg materialy, v. 2, no. 7, 1966, 1200-1205			
TOPIC TAGS: indium compound, antimonide, semiconductor conductivity			
ABSTRACT: An attempt was made to identify the impurities in InSb on the basis of their characteristic emissions and half-lives following heat treatment of InSb in quartz ampoules activated by a flux of slow neutrons ( $0.9-2.4 \times 10^{13} \text{ n/cm}^2 \text{ sec}$ ) in an atomic pile. It was shown by the gamma-spectroscopic method that the radioactive impurities Na <sup>24</sup> , Cu <sup>64</sup> and Si <sup>31</sup> migrated from the neutron-activated quartz into n-InSb. The experimental data indicate that the chief cause of the change of the conduction sign during heat treatment of n-InSb is the diffusion of copper. It was shown that vacuum annealing of the ampoules prior to the activation decreases the activity of the n-InSb samples by a factor of 20 to 60. Authors thank L. A. Bovina, M. F. Poluboyarinova and V. G. Vinogradova for their assistance. Orig. art. has 6 figures and 2 tables.			
SUB CODE: 20/ SUMM DATE: 27Oct65/ ORIG REF: 009/ OTH REF: 001 Card 1/1 net .UDC1 546.682'11:537.31133			

ACCESSION NR: AT4042667

S/0000/63/000/000/0118/0120

AUTHOR: Gambarova, R. Kh.

TITLE: Role of the vestibular organ in the regulation of blood sugar level

SOURCE: Konferentsiya po aviationskoy i kosmicheskoy meditsine, 1963.  
Aviationskaya i kosmicheskaya meditsina (Aviation and space medicine);  
materialy\* konferentsii. Moscow, 1963, 118-120

TOPIC TAGS: vestibular organ, vegetative function, rabbit, blood sugar,  
vestibular stimulation, blood sugar level/Barani chair

ABSTRACT: The vestibular organ, in addition to being instrumental in coordination and movement, is associated with some vegetative functions of the organism. To test the vestibular vegetative function, normal rabbits were rotated on a Barani chair at various speeds to determine how this activity influenced changes in blood sugar level. Rabbits in which one or both vestibular organs had been removed were similarly tested. In addition, the effects of caffeine and bromine on vestibular reflexes were studied. In normal  
Card 1/2

ACCESSION NR: AT4042667

rabbits, variations in blood sugar level were a function of duration, speed, and repetition of rotation. Under the influence of caffeine and simultaneous vestibular stimulation, there was an initial rise followed by a sharp drop in the blood sugar level of rotating animals. Under these same conditions, bromine had a net inhibitory effect on blood sugar level. In both cases, however, there was a normalization in blood sugar level after rotation was terminated. Rotating animals with one vestibular organ removed showed a rise in blood sugar level, whereas rotating animals with both organs removed showed no significant change.

ASSOCIATION: none

SUBMITTED: 27Sep63

ENCL: 00

SUB CODE: LS

NO REF SOV: 000

OTHER: 000

Card 2/2

GAMBAROVA, R. Kh.

Changes in the content of blood sugar following stimulation of the vestibular apparatus with rotations of constant frequency during a varying period of time. Vop. fiziol. 6:44-51 '69.

(MIRA 17:11)

GAMBARYAN, A.O.

Spiral flow down a spillway. Izv. AN Arm. SSR. Ser. FIZM T nauk 6 no.1:  
79-90 Ja-P '53. (MLRA 9:8)

1. Vodno-energeticheskiy institut AN Armyanskoy SSR.  
(Spillways)

GAMBARYAN, A.O.; MAILYAN, N.N.

Experimental investigation of roll-waves in an overturbulent  
flow. Izv. AN Arm.SSR. Ser.tekhn.nauk 11 no.4:21-31 '58.  
(MIRA 11:10)

1. Vodno-energeticheskiy institut AN ArmSSR.  
(Hydrodynamics)

GAMBARYAN, A.O.

"Nonwavy" profile of the transverse section of a high-velocity flow under superturbulent water motion conditions. Izv.AN Arm. SSR. Ser.tekh.nauk 15 no.2:23-31 '62. (MIRA 15:6)

1. Institut vodnykh problem AN Armyanskoy SSR.  
(Hydrodynamics)

GUSEYNOV, R.G.; GAMBARYAN, A.Ye.

Effectiveness of fertilizers applied to cabbage and onions in  
Apsheron. Izv. AN Azerb. SSR Ser. biol. i sel'khoz. nauk no. 3:81-86  
'59. (MIRA 12:8)

(Apsheron Peninsula--Cabbage) (Apsheron Peninsula--Onions)  
(Fertilizers and manures)

GAMBARYAN, G.S.

Results of the study of the cercosporiosis of the grapevine in the  
Armenian S.S.R. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki. 2 no.5:  
449-454 '49. (MLRA 9:8)

1. Institut vinodeliya i vinogradarstva Akademii nauk Armyanskoy  
SSR.

(ARMENIA--GRAPE--DISEASES AND PESTS)

GAMBARYAN, G.S.; SARKSYAN, A.A.

Some problems in the use of airplane dusting against mildew of  
grapevine. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki. 4 no.5:473-480 '51.  
(MLRA 9:8)

1. Institut vinodeliya i vinogradarstva Akademii nauk Armyanskoy  
SSR.  
(Aeronautics in agriculture) (Grapes--Diseases and pests)  
(Mildew) (Dusting and spraying)

САВЕНКИНН, Т.М.

Review of Applied

Mycology.

V. XXXIII Part 1.

Jan. 1954

GAMBARYAN (G. C.). Способ борьбы с Оидиумом. [A method of controlling Oidium.]—Сад и Огород [Orchard & Garden], 1953, 5, p. 78, 1953.

Two applications of colloidal sulphur suspension (1 per cent.) are recommended for the control of vine *Oidium* disease [*Uncinula necator*; *R.A.M.*, 31, p. 166] in the U.S.S.R. A third application would be advisable in years when the disease is more severe. Colloidal sulphur plus Bordeaux mixture (both at 1 per cent.) was also effective against *U. necator* and against downy mildew [*Plasmopara viticola*; loc. cit. and preceding abstract] and is recommended whenever the diseases occur together.

GAMBARYAN, G.S., kand. sel'skokhozyaystvennykh nauk

Zineh, substitute of Bordeaux mixture. Zashch.rast.ot vred.  
i bol. 4 no.1:39 Ja-F '59. (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity  
rasteniy, Leningrad.  
(Carbamic acid) (Bordeaux mixture)

GAMBARYAN, G.S., kand.sel'skokhoz.nauk; KHACHATRYAN, A.L., nauchnyy sotrudnik

Foliar nutrition and grapevine diseases. Zhashch.rast.ot vred. i bol.  
4 no.4:28 Jl-Ag '59.

(MIRA 16:5)

(Armenia-Grapes-Disease and pest resistance)  
(Plants-Nutrition)

GAMBARYAN, G.S., kand.sel'skokhoz.nauk

Ammonia solution of zinc salt of salicylanilide against mildew.  
Zashch. rast. ot vred. i bol. 6 no.5:27-28 My '61. (MIRA 15:6)  
(Salicylanilido)  
(Armenia--Mildew)

GAMBARYAN, G.Ye.

Effect of quantity and combination of mineral fertilizers on the  
yield and quality of potatoes. Izv. AN Azerb. SSR. Ser. biol. nauk  
no.3:103-109 '65. (MIRA 18:10)

GAMBARYAN, K.

Improve the industrial management. Prom.Arm. 5 no.11:6-9  
N '62. (MIRA 15:12)

1. Zaveduyushchiy otdelom promyshlennosti i transporta  
TSentral'nogo komiteta Kommunisticheskoy partii Armenii.  
(Armenia--Industrial management)

BOLOTINA, F.Ye.; GAMBAIKYAN, Kh.P.; DENISOVA, G.A.; DUBROVINA, L.I.; KOZHINA, I.S.; KYURKCHAN, V.N.; MAKAROVA, T.I.; PAVLOVA, U.G.; REZVETSOV, O.A.; SMIRNOVA, V.V.; SURZHIN, S.N., kand. tekhn. nauk; TAMAMSHYAN, S.G.; TRUSOVA, S.A.; FILOGRIYEVSKAYA, Z.D.; CHINENOVA, E.G.; SHISHKINA, N.N.; IL'IN, M.M., zasl. deyatel' nauki RSFSR, doktor biol. nauk prof., red.; PRITYKINA, L.A., red.; ZARSHCHIKOVA, L.N., tekhn. red.

[Spice and aromatic plants of the U.S.S.R. and their use in the food industry] Prirodo-aromaticeskie rasteniia SSSR i ikh ispol'zovanie v pishchevoi promyshlennosti. Moskva, Pishchepromizdat, 1963. 430 p. (MIRA 17:2)

Communist U.S.

OTRSPL No. 45

Gambaryan, L.S. (I.P. Pavlov Institute of Physiology, U.S.S.R. Academy of Sciences), Some  
peculiarities in the activity of the skin and visual analyzers of a dog, 705.8

Akademika Nauk S.S.R., Doklady Vol. 79 No. 4 - 1451

GAMBARYAN, L.S.; AYRAPET'YANTS, E.Sh., zaveduyushchiy.

Problem of conditioned defensive reflexes. Trudy Inst.fiziol. 1:73-94 '52.  
(MLR 6:8)

1. Laboratoriya interotseptivnykh uslovnykh refleksov.  
(Conditioned response)

GAMBARYAN, L.S.; AYRAPET'YANTS, E.Sh., zaveduyushchiy; BYKOV, K.M., akademik,  
direktor.

Conditioned interoceptive reflex in high resection of the posterior columns  
of the spinal cord. Vop.fiziol.int. no.1:166-174 '52. (MLIA 6:8)

1. Laboratoriya interotseptivnykh uslovnykh refleksov Instituta fiziologii  
im. I.P.Pavlova Akademii nauk SSSR (for Ayrapet'yants). 2. Institut fiziolo-  
gii im. I.P.Pavlova Akademii nauk SSSR (for Bykov).  
(Spinal cord) (Conditioned response)

GAMBARYAN, L.S.; PANARDZHYAN, V.V.

About the third edition of N.A. Podkopaev's book "Methods for  
studying conditioned reflexes." Izv. AN Arm. SSR. Biol. i sel'khoz.  
nauki. 5 no.10:89-93 '52. (MLRA 9:8)  
(Conditioned response) (Podkopaev, N.A.)

1. GAMBARYAN, L. S.

2. USSR (600)

4. Reflexes

7. "Methodology in the study of conditioned reflexes." N. A. Podkopayev Reviewed by  
L. S. Gambaryan Sov. Kniga no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January, 1953. Unclassified.

GAMBARYAN, L. S.

Conditioned reflexes in dogs following damage of the posterior part of the spinal column. Doklady Akad. nauk SSSR 84 no. 5: 1097-1100 11 June 1952. (CLML 22:3)

1. Presented by Academician K. M. Bykov. 2. Laboratory of Interceptive Conditioned Reflexes of the Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR.

GAMBARYAN, L.S.

[Conditioned response in dogs following high resection of posterior columns of the spinal cord] Uslovnye refleksy u sobak posle vysokoi pererezki zadnikh stolbov spinnogo mozga. Erevan, Izd-vo Akademii nauk Armianskoi SSR, 1953. 122 p. (MIRA 11:1)

(CONDITIONED RESPONSE)

GAMBARYAN, L.S.; MATINYAN, L.A.

Valuable monograph ("Study of the reflex activity of salivary and lacrymal glands." K.S. Abuladz. Reviewed by L.S.Gambarian, L.A. Matinian). Izv. N Arm, SSR. Biol. i sel'khoz.nauki 6 no.10:93-96 ('53. (MIRA 10:10)

(SALIVARY GLANDS) (LACHRYMAL ORGANS)  
(REFLEXES) (ABULADZE, K.S.)

GAMBARYAN, L.S.

Time as a factor in cortical connections in man. Dokl.AN Arm.~~SSR~~  
17 no.3:91-96 '53. (MLRA 8:2)

1. Institut fiziologii Akademii nauk Armyanskoy ~~SSR~~ i Fiziologicheskaya laboratoriya Instituta akusherstva i ginekologii im. Krupskoy Ministerstva zdravookhraneniya Armyanskoy ~~SSR~~. Predstavleno G.Kh.Bunyatyanom.  
(Cerebral cortex)

GAMBARIAN, L.S.; MARKARYAN, L.P.; PARTEV, Z.Kh.

Possibility of the development of conditioned inhibition and switching in response to the same stimulus. Izv. AN Arm. SSR. Biol. i sel'khoz. nauki 7 no.2:73-79 '54. (MLRA 9:8)

1. Institut fiziologii Akademii nauk Armyanskoy SSR, Fiziologicheskaya laboratoriya Instituta akusherstva i ginekologii Ministerstva zdravookhraneniya Armyanskoy SSR.  
(CONDITIONED RESPONSE) (INHIBITION)

GAMBARYAN, L.S.  
MARYARYAN, P.A.; GAMBARYAN, L.S.

Visceromotor reflexes. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki 7 no.11:  
87-92 N '54. (MLRA 9:8)

1. Nauchno-issledovatel'skiy institut akusherstva i ginekologii  
Ministerstva zdravookhraneniya Armyanskoy SSR.  
(REFLEXES)

GAMBARIAN, L.S.

DERYABINA, V.L., kandidat meditsinskikh nauk.

"Certain methods of introducing I.P.Pavlov's theories into practical medicine." L.S.Gambarian, V.I.Sazontov. Reviewed by V.L.Deriabina.

Sov.zdrav. 13 no.2:56-57 Mr-Ap '54. (MIRA 7:4)

(Hospitals) (Gambarian, L.S.) (Sazontov, V.I.)

GAMBARYAN, L. S.

USSR/ Medicine - Neurology

Card 1/1 : Pub. 22 - 38/41

Authors : Gambaryan, L. S.

Title : Conditioned motor reflexes of dogs following the removal of the last several segments of the spinal chord

Periodical : Dok. AN SSSR 98/2, 307-310, Sep 11, 1954

Abstract : The conditioned motor reflexes of ten dogs following the removal of the last several segments of the spinal chord were investigated and the results are shown in graphs. Six USSR references (1927-1953).

Institution : Acad. of Sc. USSR, The I. P. Pavlov Institute of Physiology and the Scientific Research Institute of Obstetrics and Gynecology of the Ministry of Health Arm-SSR.

Presented by : Academician K. M. Bykov, May 20, 1954

GAMBARYAN, L.S.; GRIGORYAN, G.Ye.; OGANESEYAN, S.S.

Some data on cortical switching in man. Izv.AN Arm.SSR.Biol.i  
sel'khoz.nauki 8 no.2:77-86 P '55. (MLRA 9:8)

1. Institut ortopedii i vosstanovitel'noy khirurgii Ministerstva  
zdravookhraneniya Arm. SSR.  
(CONDITIONED RESPONSE)

MARKARYAN, P.A.; GAMBARYAN, L.S.; KAZAROV, A.P.; KARAGEZYAN, K.G.

Effect of reflexes from the interoceptors on phagocytosis, blood clotting,  
the quantity of leucocytes and thrombocytes. Dokl. AN Arm. SSR 20 no.4:  
155-159 '55. (MIRA 8:7)

1. Nauchno-issledovatel'skiy institut akushерства i ginekologii  
Ministerstva Zdravookhraneniya Armyanskoy SSR. Predstavлено L.A.  
Oganesyanom. (Receptors (Neurology)) (Blood)

EXCERPTA MEDICA Sec.2 Vol.9/8 Physiology, etc. Aug 56

3643. GAMBARYAN L.S. \* Motor conditioned reflexes in puppies after removal of dorsal columns of spinal cord over several segments (Russian text) DOKLADY AKAD. NAUK SSSR 1955, 105/5 (1125-1128) Graphs 3

In 12 puppies aged 1.5 to 6 months, it was found that removal of the dorsal columns of the spinal cord over several segments did not interfere with persistence of previously developed motor conditioned reflexes, nor with the formation of new ones.

Kleitman - Chicago, Ill.

EXCERPTA MEDICA Sec 2 Vol 12/10 Physiology Oct 59

4768. LOCALIZATION OF FUNCTION IN THE SPINAL CORD (Russian text) -  
Gambaryan L. S. Pavlov Inst. of Physiol., USSR Acad. of Med. Sci.;  
Obstet. Gynaecol. Res. Inst., Armenian SSR Ministry of Health - EREVAN  
1956 (20 pages) Illus. 6

The method of conditioned reflexes elaborated by Pavlov has led to the discovery of laws governing the activity of the cerebral hemispheres and has opened up wide horizons for the physiological analysis of complex constitutional phenomena. Pavlov's school sees the cerebral cortex as a receptor apparatus, as an assembly of analysors effecting the analysis and synthesis of phenomena in the surrounding medium. The cortical part of an analyser consists of a central nucleus, i.e. an aggregation of cell groups representing particular territories and functions, along with receptor cells scattered throughout the cerebral cortex. The central nucleus effects higher analysis and synthesis, and the peripheral scattered cells mediate the cruder and more elementary processes. In the wake of this study has followed a similar study by many workers in several countries on the localization of functions in the spinal cord. The author, working in the laboratory of Airapet-

siantz, obtained evidence that in the spinal cord, in addition to direct ascending tracts of deep sensation, there must exist also collateral 'reserve' proprioceptive paths. It is by fine and accurate differentiation of proprioceptive impulses coming from below upwards that the cerebral cortex, in conjunction with impulses from above downward, is able to effect coordination of the motor act. Dogs with experimental lesions of the posterior columns and horns and of the lateral columns not only regained previously formed motor-conditioned reflexes but also formed new ones, and further retained the ability of cortical localization of skin stimuli. Unilateral hemisection of the cord produces the Brown-Séquard syndrome, which in the course of 2 months becomes fairly well compensated, the restoration of function taking place via the agency of the intact contralateral hemicord; thus, after recovery, a repeat hemisection at the same site at a distance of 2 or 3 segments from the first is performed; then once again there is a loss of function which likewise recovers, i.e. the bridge remaining in the cord between the hemisected parts can suffice for the transmission of impulses. Following a hemisection of the anterior or the posterior half of the spinal cord as far as the central canal, the ensuing loss of function is followed by compensatory restoration; further, with simultaneous transection of the anterior and posterior halves of the cord at different levels, there is a regeneration of the lost motor and sensory functions of the cord. The noted delay of 1-2 months entailed in the establishment of compensation appears to run parallel with the inflicted spinal shock, being briefer in younger animals. Following establishment of motor-conditioned reflexes in dogs and then total surgical ablation of two diagnostically opposite extremities, removal of the posterior columns in the thoracic region did not substantially impair locomotive ability using the two remaining extremities. These and other cited evidences demonstrate the existence of pathways capable of transmitting proprioceptive impulses not only in the posterior columns but also in the anterior and lateral columns of the spinal cord. A simplified schematic diagram of the motor analysor included in the treatise shows the 'reserve' pathways for intracentral (intra-CNS) functional restoration: fibres from the posterior column and horn of each side proceed up the ipsilateral lateral column and also up the contralateral lateral and anterior columns, available as proprioceptive pathways and relaying in the formatio reticularis, whence proceeding to the thalamus and thence to the cerebral cortex. References 38.

Summerfield - Leeds (S)

GAMBARYAN, L.S.; GRIGORYAN, G.Ye.

New scientific work "Mechanisms of the effects of afferent stimulations"  
M.G.Durmish'ia. Reviewed by L.S.Gambarian, G.E.Grigrorian. Izv.AN Arm.  
Biol. i sel'khoz. anuki 9 no.8:101-103 Ag '56. (MLRA 9:10)  
(SPINAL CORD) (REFLEXES)

MARKARYAN, P.A.; GAMBARYAN, L.S.; KAZAROV, A.P.; KARAGEZYAN, K.G.

Reflex actions from interoceptors on phagocytosis, blood coagulation,  
and leukocyte and thrombocyte counts. Viziologicheskii zhurnal. 42 no.4:382-389  
(MILRA 9:7)  
Ap '56.

1. Fiziologicheskaya laboratoriya nauchno-issledovatel'skogo  
instituta akusherstva i ginekologii Ministerstva zdravookhraneniya  
Arm. SSSR, Yerevan  
(PHAGOCYTOSIS, physiology,  
eff. of interoceptive stimulation in dogs (Rus))  
(BLOOD COAGULATION, physiology.  
same)  
(LEUKOCYTE COUNT, physiology.  
same)  
(BLOOD PLATELETS,  
count, eff. of interoceptive stimulation in dogs (Rus))

GAMBARYAN, L. S.

"Concerning the Question of Spinal Shock After Injuries to Posterior Columns of the Spinal Cord," by L. S. Gambaryan, Laboratory of Interoceptive Conditioned Reflexes of the Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR, Doklady Akademii Nauk SSSR, Vol 109, No 1, 1956, pp 221-224

In an attempt to resolve the mechanism of spinal shock, experiments were performed on 12 dogs by the removal of the dorsal columns of the spinal cord over a distance of 4-7 cm and at the level of T<sub>6-12</sub> vertebrae. Removal of tissue was confirmed by histological analysis. It was also observed that deep depression appeared only in those dogs who, either by the operative method or through complications, suffered disturbances of the continuity not only of the posterior columns but, in various degrees, also of the lateral columns and ventral columns.

A comparison of the physiological and morphological analysis leads to the assumption that two counteracting mechanisms take place in an injured organism: a further decomposition of tissues and a counteracting compensatory function. If the two processes are reciprocally balanced, no external symptoms of any disturbance appear, but if the equilibrium is upset, functional deficiency results.

Results of these experiments combined with published data prove that the syndrome of spinal shock caused by injury to the dorsal columns of the spinal cord is related not to the severance of the dorsal columns alone but to the great injury inflicted to the transverse section of the spinal cord. (U)

SUM. 1374

GAMBARYAN, L.S.

Function of the damaged spinal cord. Trudy Inst. fiziol. 6:69-74  
'57. (MIRA 11:4)

1. Laboratoriya interotsptivnykh uslovnykh refleksov (zaveduyushchiy  
E. Sh. Ayracet'yants).  
(SPINAL CORD)

GAMBARJAN, L.S.

Effect of lesions on spinal functions. Cesk. fysiol. 6 no.3:317-322

Aug 57.

Physiol. i Armenske akademie ved, Jerevna.

1. Physiologichy ustav Armeniske akademie ved, Jerevna.  
(SPINAL CORD, physiology,  
eff. of section on motor funct. in dogs (Cx))

USSR / Human and Animal Physiology. Nervous System.

T-10

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3822

Author : Markaryan, P. A.; Gambaryan, L. S.

Inst : AS ArmeSSR

Title : About Particularities in Restoration of Functions  
During Ontogenesis After Injury to Spinal Cord

Orig Pub : Izv. AN ArmeSSR, biol. i s.-kh.n., 1957, 10, No 8,  
31-36

Abstract : In puppies, after surgical damage to the spinal cord  
(section of its anterior or posterior half, removal of  
the posterior columns, hemisection), restoration of  
motor and sensory functions occurred much faster than  
in adult dogs; the spinal shock was also very weak or  
completely absent. According to the authors, this  
may be explained by the low functional, and possibly,  
morphological specialization and differentiation of

Card 1/2

85

USSR / Human and Animal Physiology. Nervous System.

T-10

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3822

the conducting intracentral tracts of the spinal cord.  
-- Ya. L. Slavutskiy

Card 2/2

L.S. GAMBARYAN

v

USSR/Human and Animal Physiology. The Nervous System.

Abs Jour: Ref. Zhur-Biol., No 6, 1958, 27325.

Author : L.S. Gambaryan

Inst : ~~UNIVERSITY OF SIBERIA~~

Title : A Method of Removing the Posterior Columns of the Spinal Cord.

Orig Pub: Fiziol. zh. SSSR, 1957, 43, No 4, 371-373.

Abstract: After laminectomy and sectioning of the dura mater, the pia mater is sectioned and peeled off from the cord by means of a special hook. The hook is introduced into the tissue of the cord via the sulcus lateralis posterior and directed toward the midline and the posterior columns are peeled off.

Card : 1/1

82

CAMBARYAN, L.S.

20-5-58/60

AUTHOR                    GAMBARYAN, L.S.  
TITLE                    On the Activity of the Affected Motor Analyser  
PERIODICAL            (K deyatel'nosti povrezhdennogo dvigatel'nogo analizatora. Russian)  
                          Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 5, pp 1124-1127 (U.S.S.R.)  
ABSTRACT                The results of earlier investigations on the function of the motor analyser at one or the other degree of injury of its morphological structure enabled the author to find out that the motor food- and electrode-extero- and interoceptive-conditioned reflexes are conserved and can be newly formed, after severing the posterior column of the spinal cord as well as after its removal on the length of several segments. Moreover it was found out that in animals in which a functional rearrangement of the nervous system had been caused by amputation of an anterior and the opposite posterior extremity the injury of the nerve tract of the motor analyser (removal of the posterior column) did not bring about any essential disturbances of the motor act. After the mentioned block of proprioceptive signalization the animals, awaked from narcosis, moved just as they did before the operation. Based upon this and other data the author concluded that the nerve tract of the motor analyser is not only represented in the posterior columns, as hitherto assumed, but also in other parts of the spinal cord. If this were true, it would be interesting to find out the relations between the mentioned proprioceptive tracts and the dispersed parts of the section of cortex

Card 1/3